

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of maximising the fault coverage on an integrated digital circuit by re-ordering a number of test vectors for testing the digital circuit, said method comprising :

- a) providing an initial set of test vectors T_0 ;
- b) providing an original set of faults F_0 ;
- c) selecting faults at pseudo-random from the original fault list to form a sample fault list F_N ;
- d) forming a vector set T_{N-1} and simulating the vector set T_{N-1} against fault list F_N ;
- e) discarding any vector from the vector set T_{N-1} which does not detect any faults;
- f) saving the remaining vectors as vector set T_N ;
- g) repeating the above steps c) to f) N M times with N having a value of 1 to M so that at the end of M steps, test vector sets T_1 to T_M are saved;
- h) removing duplicate vector patterns in each vector set T_N ; and
- i) saving the duplicate free vector set V_N with N having a value 1 to M , initialising the final vector set and appending vector sets V_M through V_0 to produce a final vector set T_F .

2. (Previously Presented) A method as claimed in claim 1 wherein in step g) M is 10 and steps c) to f) are therefore repeated ten times.

3. (Original) A method as claimed in claim 1 wherein the list of faults selected from the original list of faults have a probability of X^{-N} to produce subset fault list F_N .

4. (Original) A method as claimed in claim 2 wherein the list of faults selected from the original list of faults have a probability of X^{-N} to produce subset fault list F_N .

5. (Original) A method as claimed in claim 3 wherein $X=2$.

6. (Currently Amended) A method as claimed in claim 1 wherein the step of removing duplicate vector patterns is achieved by :

- j) copying the original fault list F_O to provide a secondary fault list G_N ;
- k) fault simulating vector set T_N against G_N and deleting any vectors which find no faults;
- l) saving the resulting vectors as vector set V_N and saving the list of undetected faults as list G_{N-1} ;
- m) repeating steps k) and l) ~~$M+1$~~ M times with N having values M to θ 1.

7. (Original) A method as claimed in claim 1 wherein the step of removing duplicate vector patterns is achieved by conducting a text search through the list of files of vector patterns looking for identical patterns, identifying the identical patterns and deleting the identical patterns identified.